# MONTANA

## Wildlife

MONTANA FISH AND GAME DEPARTMENT

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**Cover Picture**

(Photo by Lloyd Casagbanda)

**When the warm summer days blend into crispness of "Indian Summer," then Montana becomes alive with vivid color. Leaves of trees and bushes seemingly try to outdo each other with their brillant reds, gold, yellows, and rusts. The time of chase is nearing and the hunters will soon be afield.**

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**Editor—Vernon Craig**

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# Don't Be a DEFEATIST

**By ROGER LATHAM, Outdoor Editor, Pittsburgh Press**

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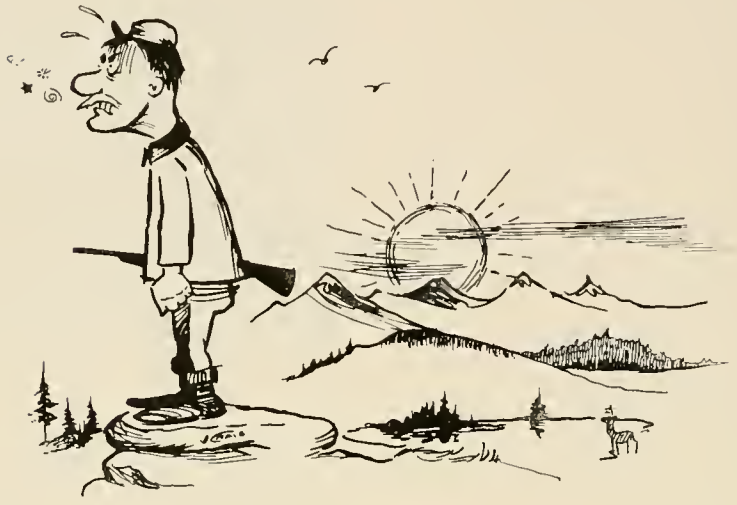


I suppose there are literally hundreds of resolutions a sportsman could make for the 1965 hunting and fishing seasons.

I'm sure that many hunters' and fishermen's wives would be glad to make a few suggestions. There would be one about muddy boot tracks and maybe muddy dog prints on the kitchen linoleum; probably something about the noise a sportsman makes when he gets up at 4 a.m. to go duck hunting or fishing; maybe a gentle hint concerning his practicing on his game callers half the evening while she's trying to listen to the radio or watch television.

But there is just one resolution I'd like to recommend that a lot of hunters (and fishermen) adopt: resolve to get greater enjoyment from their hours out of doors during the coming year.

I find, to my dismay, that too many sportsmen no longer get true pleasure from their outdoor experiences. They've soured for one reason or another and go fishing or hunting literally carrying a chip on their shoulders. They often leave their homes convinced that there isn't any game in the fields or forests or fish in the streams and that the whole excursion is a waste of time.

This defeatist attitude leads to ulcer-producing symptoms. A man in this state of mind gets no pleasure from a rosy-pink sunrise, doesn't even hear the birds serenading the dawn, ignores the cool breeze blowing across the water, is apt to resent the presence of other sportsmen who wish to share the fields or water with him and may even curse the colorful panfish which takes his bait.

Unfortunately, unless he happens to be a "loner," he probably will spoil much of each day's fun for his companions as well.

A man in this frame of mind stops trying to improve his ability to find game and catch fish. He refuses to change his

techniques even when they fail to produce. And he lives in the past, talking constantly about the "good old days."

This man seems to prefer to expend his energies venting his wrath against a host of imaginary causes for his failure.

His criticisms and beratings are too often unfounded and commonly in direct opposition to the facts. And the last thing he is willing to do is learn the facts because they are likely to conflict with his own theories. He refuses to read about game and fish and their management. He doesn't believe the figures collected by the Game and Fish Commissions and pooh-poohs the reports and findings of the trained fish and wildlife biologists.

Stangely though, he firmly believes that his own conclusions about the abundance and scarcity of fish and game, based entirely upon his own meager experiences, are infallible. He even tells anyone who will listen just how his state could be made a fisherman's and hunter's paradise if his methods and plans were followed.

The happiest outdoorsmen I know are the best informed. They are men who make a hobby of learning all they can about the life history and habits of the game they hunt or the fish they try to catch. They go to some pains and study the work of Game and Fish Commissions and get acquainted with the men doing the work in the field. They're not too busy to visit game and fish management projects during the year and to see just how license money is being spent.

These men, if they are confirmed grouse hunters, for example, will study books on grouse. They find out what they eat, what constitutes a good grouse cover, and what their habits are during fall and winter and their response to different kinds of weather.

They examine each bird to see whether it's a bird of the year, they're interested in knowing whether it's a cock or a hen, they open the crop and carefully the contents and they always have some comment about its size and coloration.

These men can drive along a back road in strange territory and spot good grouse cover from the road. They know what trees and shrubs are producing nuts, fruit or berries and where these plants grow.

But more than that, they get shooting and they catch fish even in the "lean" years because they know what they're doing. And these men don't measure success in terms of the daily or season limit, but more in respect to the unusual and interesting things they see, the way the dogs work, lunch at noon, the companionship, and the many other rewards of a day out of doors.

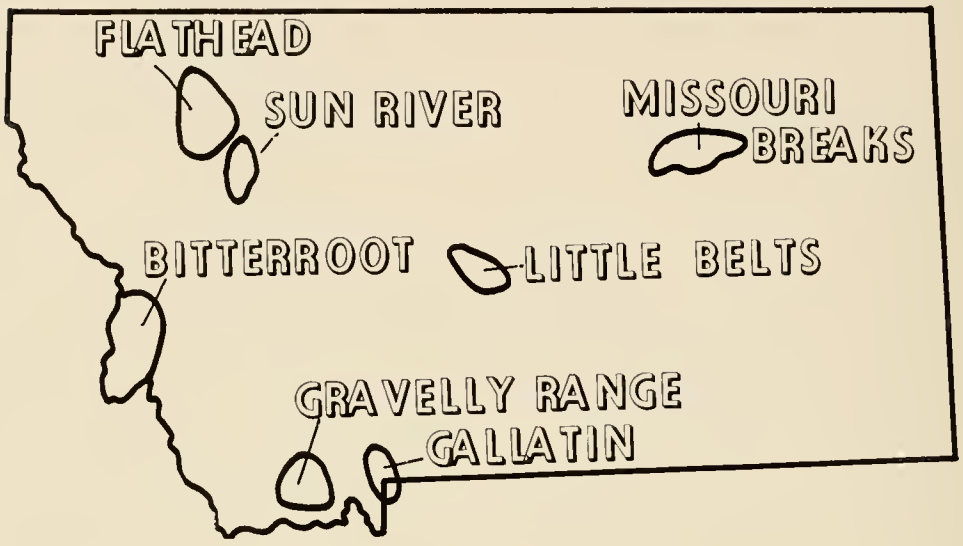
The man who refuses to adopt a resolution to have more fun outdoors during the '65 seasons and is convinced that "the good old days are gone forever," should remember one thing—20 or 30 or 40 years ago, he was covering more ground, hunting more hours, getting into the thick places more often and had better sight and hearing.

There are still plenty of hunters who get their buck, shoot a turkey or kill their season limit of birds every year.

Are these men just lucky? Or are they men who have taken the time and the trouble to learn where and how to hunt?

# Seven Montana Elk Herds

JAMES M. PEEK, Research Biologist




Location of the seven elk herds.

**Big game hunters generally have their favorite stomping grounds, but they also like to know how their own spot compares to that over the hill. Here is a report that compares some information on elk in the Bitterroot, Flathead, Gallatin, Gravelly Range, Little Belts, Missouri Breaks, and Sun River areas. The information was collected from 1958 through 1963. In case you wish to dig deeper, there's a bibliography at the end.**

**Here are some things that might be kept in mind as the various elk herds are compared.**

The basic goal of elk management and for all other game management in Montana, is to produce as many animals for hunters as possible without allowing game to increase to a point where they harm their own habitat. At the same time, elk production must be compatible with other land uses. This goal by definition implies long term management—production of elk for enjoyment by ourselves and generations that follow. It also means that maintenance of the elk's environment is a top priority consideration. Although each elk herd poses a unique management problem, there are basic principles that provide a groundwork applicable to each.

The elk herds discussed here occupy widely differing environments which exemplify the adaptability of the species. However, all have one thing in common —they inhabit large tracts of relatively undeveloped land, a major share of which is in public ownership. The Sun River, Bitterroot, and Flathead herds occupy, in part, designated wilderness or primitive areas on National Forest land. The Gallatin herd occupies part of the rugged northwest corner of Yellowstone National Park. However, wilderness areas and National Parks are not necessary for the maintenance of a substantial elk population as is evident in the Gravelly Range and the Little Belts where ownership is largely National Forest. Elk in the Missouri Breaks occupy public domain, a federal game range, and private land.

### Comparison of Winter Forage Supplies

Montana's elk management program is based primarily upon the quality and quantity of winter forage available to each herd. The south-facing slopes and

Table I. OWNERSHIP PATTERN AND TOTAL SQUARE MILES FOR THE YEAR-LONG RANGES OF SEVEN MONTANA ELK HERDS.

| Area | Approximate Square Miles | Approximate Ownership |
|---|---|---|
| Bitter Root | 2540 | 75% National Forest, 25% private 1% Fish & Game |
| Flathead | 2332 | 100% National Forest |
| Gallatin | 432 | 74% National Park and National Forest 24% private, 2% Fish & Game |
| Gravelly Range | 1052 | 90% National Forest, 9% private, 1% Fish & Game |
| Little Belts | 970 | 89% National Forest, 1% Public Domain, 9% private 1% Fish & Game |
| Missouri Breaks | 1080 | 50% Public Domain, 30% Federal Game Range 20% private |
| Sun River | 531 | 90% National Forest, 8% Fish & Game, 2% private |

ridgetops which blow free of snow and thus become available for foraging during the snow periods will, by virtue of the amount and kind of forage they supply, influence such things as survival, elk calf production, individual condition, and antler development. The problem is to keep elk populations at levels which do not cause deterioration of winter ranges through overuse. Where winter forage is in poor condition, fewer elk must be maintained so reduced grazing will allow forage improvement.

This management does not mean that other seasonal ranges are not considered or are not important to elk. It merely follows the axiom that winter forage is nearly always the most significant factor and can therefore safely be used as a basic index to herd health.

Winter food habit studies and range surveys have been conducted across the state on several different environments. In general, studies and surveys show grasses are the most used winter elk forage except in the Flathead, where browse (woody plants) is the dominant winter food. We see that bluebunch fescue and bluebunch wheatgrass are important in the Gravelly Range, Gallatin, Little Belts, and Bitterroot. Rough fescue and bluebunch fescue are important in the Sun River. Western wheatgrass and Sandberg bluegrass are important species in the Missouri Breaks.

Different kinds of browse plants are found in these areas; however, important species east of the Continental Divide include big sage and willow, while west of the Divide, mountain maple, chokecherry, serviceberry, ceanothus and willow are important. Browses are relatively more important west of the Divide than east, with the Moiese and Gallatin areas being possible exceptions.

Although these summaries may indicate the general picture of elk winter food habits in the areas they represent, elk also vary their diets according to the immediate weather and snow cover. Thus, in the Gravelly Range during snow storms and heavy snow crusting, elk switch from their usual diets of predominantly fescue and wheatgrass to three-tip sage and big sage, willow, and giant wild-rye. These species usually protrude above the snow and thus serve as emergency foods.

In the Gallatin, where forage is badly deteriorated, elk commonly eat Douglas fir and lodgepole pine. Conifers are not preferred elk forage, but they are eaten because more palatable species, such as sage, willow, and grasses are in short supply on wintering areas. Browse may compose as much as 91 per cent of the elk's diets when winter conditions are severe in the Gallatin.

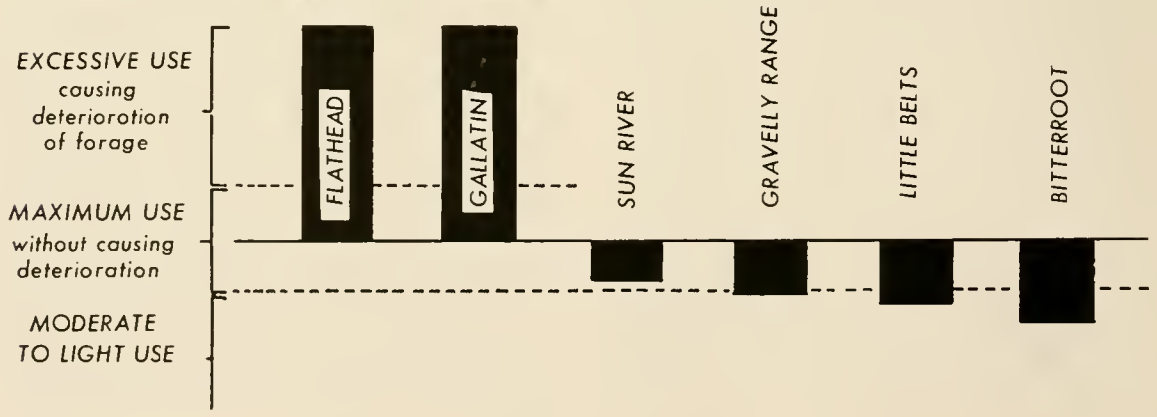
There has been chronic overuse of the Flathead and Gallatin elk winter areas

Table II SUMMARIES OF ELK WINTER FOOD HABITS ON EIGHT MONTANA WINTER RANGES.

| Area | Forage Class (percent) Browse | Grass | Forbs | Major Browses | Two Major Grasses |
|---|---|---|---|---|---|
| Bitterroot-Selway | 25 | 65 | Tr. | serviceberry<br>chokecherry<br>bitterbrush<br>willow | bluebunch fescue<br>bluebunch wheatgrass |
| Flathead | 60-90 | 10-40 | Tr. | mountain maple<br>willow | bluebunch fescue<br>—— |
| Gallatin | 23 | 69 | 8 | big sage<br>willow | bluebunch wheatgrass<br>bluebunch fescue |
| Gravelly Range | 7 | 90 | 3 | big sage<br>horsebrush | bluebunch wheatgrass<br>bluebunch fescue |
| Little Belts | 6 | 88 | 7 | kinnickinnick<br>Oregon grape | bluebunch wheatgrass<br>bluebunch fescue |
| Missouri Breaks | 5 | 91 | 4 | big sage<br>Rocky Mtn. juniper | western wheatgrass<br>Sandberg bluegrass |
| Moiese Bison Range | Tr. | 100 | Tr. | —— | —— |
| Sun River | 10 | 85 | 5 | fringed sage<br>horizontal juniper | bluebunch fescue<br>rough fescue |

while use of the other listed winter ranges has been generally moderate. The accompanying table is based upon Fish and Game Department and U.S. Forest Service range surveys across the wintering areas. It purposefully combines all available data for each winter range, since elk may not concentrate to forage in the same locality on a range each winter. For example, Gallatin elk may winter close to Yellowstone Park during mild winters but use lower areas more during severe ones. Similarly, in the Sun River area a portion of the North Fork range gets consistently heavy winter use, while most winter areas have been moderately used. The same shifts in local distribution and range use occur in the other areas that were studied. Generally speaking, the Bitterroot, Gravelly Range, Little Belts, Missouri Breaks (not listed in the table), and Sun River elk were in balance with their forage supply during the period under consideration, while the Gallatin and Flathead elk were not.

Figure 11. Relative use of winter forage supplies by six elk herds between 1958 and 1963.



### Comparison of Calf Production and Survival

The ratio of observed cows in a herd is commonly used as an index to the production of elk. It is expressed as the number of calves observed per 100 cows. Ratio counts are usually obtained in January, February and March, when the elk are concentrated on winter ranges and are easiest to see. Usually biologists make classification counts from the ground with aid of binoculars and spotting scopes, but a helicopter has successfully been used on the more remote wintering areas, such as those in the Flathead. A sample of at least 100 animals are classified before the ratio is considered meaningful, and usually larger samples are obtained if possible. This ratio reflects primarily (1) breeding success of the population two falls prior to the winter classification, and (2) survival of the resulting calf crop through the first 8-10 months of life. The greatest value lies in the comparison of production trends between years and between areas. Minor fluctuations in calf crops can occur with each set of winter conditions and the corresponding availability of forage. The calf production ratios also reflect the condition of winter forage supplies and the intensity of herd harvest. Presently, the most productive herds are those in the Bitterroot, Gravelly Range, Little Belts, and Missouri Breaks. These elk occupy winter ranges that are in good condition and their production is high even during the most severe winters. The Missouri Breaks herd, which was introduced in the early 1950's from Yellowstone Park stock, has not been as intensively harvested as the other three, but high calf ratios indicate that the population has been increasing. The Sun River herd, while occupying relatively good winter forage areas, has received only light harvest during the period under consideration and calf crops remain much below their potential. Table III lists the cow-calf ratios obtained from the various elk herds over the six year study period. The Gallatin and Flathead herds exhibit chronically poor production.

### Hunter Harvest Comparisons

Hunter harvest is the prime management tool used to regulate elk. Harvest information is obtained in two ways: through hunter checking stations set up along key access routes during the hunting seasons, and by a post-season hunter-mail survey. Information in Table IV is obtained from mail surveys. This mail survey is useful primarily to indicate the trend in harvests and does not give an exact measure of the numbers of elk killed. Survey methods are modified when necessary to obtain more accurate data. Presently, the mail survey is more accurate for some areas than others.

The average harvest figure masks the wide fluctuations in yearly harvests for each area. For instance, Gallatin harvests, according to checking station records,

**Table III COMPARISON OF COW-CALF RATIOS FOR SEVEN MONTANA ELK HERDS OVER THE PERIOD 1958-1963.**

| Area | Average Ratio | | Range |
|---|---|---|---|
| | Cows | Calves | |
| Bitterroot | 100 | 54 | 100:43-73 |
| Flathead | 100 | 25 | 100:18-31 |
| Gallatin | 100 | 30 | 100:24-35 |
| Gravelly Range | 100 | 61 | 100:58-65 |
| Little Belts | 100 | 54 | 100:51-58 |
| Missouri Breaks | 100 | 53 | 100:47-60 |
| Sun River | 100 | 31 | 100:25-40 |

have fluctuated between 1177 animals and 88 animals. Although these fluctuations are partially attributable to changes in hunting seasons, weather and snow cover play a major role. The fluctuations also clarify some of the practical aspects of keeping an elk population in balance with its forage supply. Even with the wide harvest variation some areas have adequate forage because the elk herds have been held within that level which the forage plants can withstand. The hunter harvest is essentially an inexact management tool but it is still the best tool available. The vagaries of weather, elk, and hunters themselves make accurate prediction of kill and their control difficult.

Access to elk is a major consideration. Keeping in mind that the department strives to maintain maximum elk production without damaging the forage supplies and that we presume to regulate elk with hunter harvest, one can see that the most accessible areas have had the most restrictive hunting seasons. In the Gravelly Range and Little Belts where networks of jeep trails and roads provide ready access to most of the elk habitat, combinations of antlered bull and one to three day either sex seasons are customary. In the Missouri Breaks, similar access prevails and limited permit hunts are used. These areas all contain much open terrain, and timber is liberally interspersed with openings, making visibility much easier than in the more densely timbered elk ranges. Deep snow or rain may limit access and curtail the harvest.

The Bitterroot and Sun River harvests are taken mainly from elk moving from back country down to more accessible wintering areas. Heavy snows which trigger elk movements tend to increase the kill. Seasons are generally more liberal than in the more accessible hunting country, but quotas are established to control the either-sex harvests.

The Flathead elk are perhaps the least accessible in the state, with horse and foot trails the principal means of travel into the heavily forested elk ranges. Hunting seasons are traditionally opened in mid-September when back-country hunting is at its best. When deep snows fall in this country, access becomes difficult.

The situation is essentially the reverse in the Gallatin. There the hunter harvest is largely dependent on the elk migration from Yellowstone Park to open areas on the winter range. In the Gallatin the bulk of the elk are generally taken after snow and cold weather have caused the elk to migrate onto winter ranges, and this usually occurs after November 1.

We see then that each of the seven areas presents its own individual peculiarities of accessibility which influences hunting seasons and harvests. It should be noted that the most accessible areas have the more restrictive seasons and customarily are those in which the elk are in balance with their winter ranges and have high calf production.

### Hunter Success Comparisons

Table IV lists average hunter success determined from the mail survey. Hunter success is expressed as the percentage of active hunters who kill an elk. Success is influenced by the number of hunters, the number and availability of elk, and the type of season. In the Missouri Breaks where the limited permit system purposefully restricts the number of hunters and where the elk are readily accessible, hunter success runs much higher than in the other areas. Antlered bull seasons in the Gravelly Range and Little Belts tend to reduce hunter success. Hunter success is consistently lowest in the Little Belts, largely due to the type of seasons, ready access and its proximity to large population centers which are further from other favorite elk hunting districts. Estimates of hunter success over the six year period for the remaining five areas overlap sufficiently that one would have little cause to select one area over the others as being a better place to hunt. Hunter proficiency and an intimate knowledge of the area

Table IV ESTIMATED RANGES OF ELK HARVESTS, HUNTER SUCCESS AND TYPICAL HUNTING SEASONS FOR SEVEN HUNTING UNITS, 1958-1963.

| Area | Average Harvest | Average Success | Typical Hunting Season |
|---|---|---|---|
| Bitter Root | 1436 | 24 | Mid-Sept. to early Dec. **E.S.** Late Dec. **B.A.** |
| Flathead | 936 | 27 | Mid-Sept. to mid-Nov. **E.S.** |
| Gallatin | 325 | 20 | Mid-Sept. to early Nov. **E.S.** |
| Gravelly Range | 868 | 23 | Mid-Oct. to mid-Nov. **A.B.** 1-3 days **E.S.** |
| Little Belts | 374 | 10 | Mid-Oct. to mid-Nov. **A.B.** 1-3 days **E.S.** |
| Missouri Breaks | 30 | 78 | November permit hunt |
| Sun River | 638 | 16 | Mid-Oct. to mid-Nov. **E.S.** |

**A.B.**—Antlered bulls
**B.A.**—Branched antlered bulls
**E.S.**—Either sex

greatly influence individual hunter success.

### Age Distributions Within the Elk Herds

Important indicators of p o p u l a t i o n status is the relative age of an elk herd—the proportion of yearlings, prime adults, and old adults. Such information may indicate intensity of harvest and be used as an index to herd health. When larger proportions of old animals show up in a population, past harvests ordinarily will have been light. Such a population often shows a low cow-calf ratio, and is said to be stagnant. When the age distribution runs preponderantly to younger animals, past harvests often have been adequate, cow-calf ratios in such a vigorous herd are usually h i g h, and the population is healthy and productive. Again, age distributions serve best as a guideline to herd health and must be considered in conjunction with other population indices such as the cow-calf ratio.

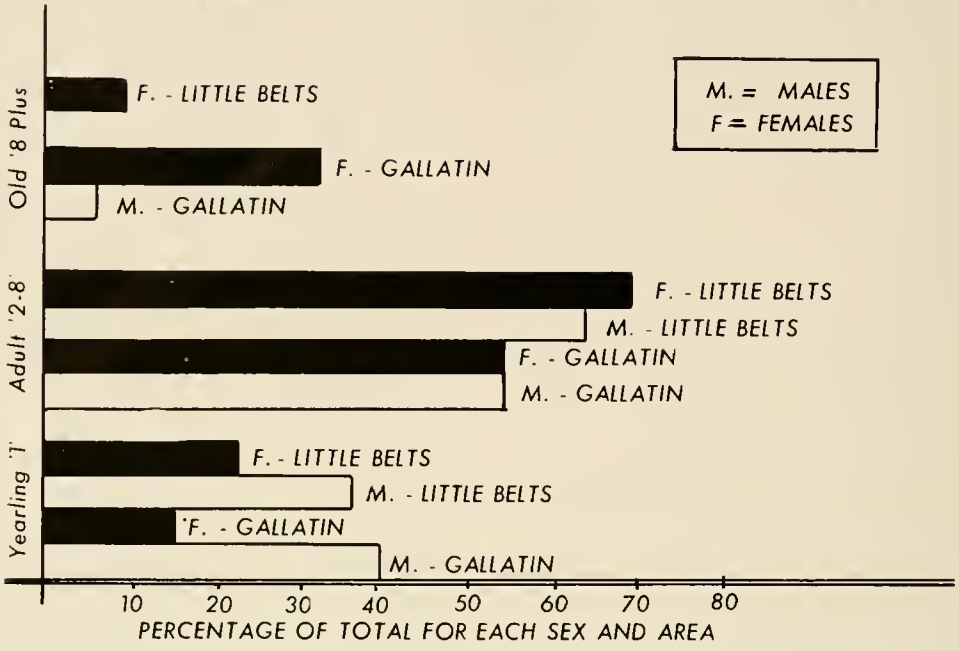
Figure 3 illustrates the age structures for the Little Belts elk herd and the Gallatin herd. The Gallatin information was obtained from examination of elk hunter checking stations. Little Belts information was obtained from calf marking studies. Calves were caught, marked, released and subsequently recovered by hunters over an eight year period. Tag returns provided data on the age of the animal when shot. One can readily see that the Gallatin herd is much older, less intensively harvested than the Little Belts herd. Also, it is notable that in both herds, the cows survive proportionately longer than the bulls.

When the bull samples in each area are compared, one sees that there were proportionately as many yearlings bulls in both, but the percentage of older males was higher in the Gallatin. This can be largely attributed to the more intensive harvest of bulls in the Little Belts. This intensive harvest of bulls in the Little Belts has not adversely influenced calf production, and may in fact be beneficial.

When the cow samples are compared, one sees that the percentage of yearling cows was less in the Gallatin than in the Little Belts and a high proportion of Gallatin cows was older. We may conclude that the Gallatin elk, despite relatively liberal hunting seasons, have not been intensively harvested and remain an unproductive, old population with a precarious future.

Age distributions obtained from the Flathead and Sun River areas generally fall into the category indicated for the Gallatin, while the Gravelly Range and Bitterroot age distributions approximated that of the Little Belts. It is evident that the most productive herds are the ones which are comprised of younger animals, and are the most intensively harvested herds in the state.

Figure III. Age structure of the Little Belts and Gallatin elk populations.




### Winter Malnutrition

Loss of elk due to malnutrition in winter and spring is the most cruel, wasteful and harmful cause of mortality. These losses are mainly calves, but elk of other ages die also when conditions become extreme. Of the seven elk herds under consideration, only the Flathead and Gallatin herds suffer winter malnutrition losses of any consequence. This is related directly to the overused forage conditions in each area.

If severe winter conditions, including deep crusted snow and subzero temperatures, were solely responsible for this waste, one could expect substantial mortality on all of the elk winter ranges during severe winters. This does not occur. The losses can be reduced and even nearly eliminated by increasing harvest to reduce herds to a point where the wintering populations can adequately subsist on the available forage.

An insidious result of malnutrition in elk is lowered production. Calf crops are low because may cows survive the winter in poor condition and cannot produce and sustain a viable calf. Thus, calf crops may remain small even through subsequent mild winters when no noticeable winter mortality may occur. Conversely crops remain high in the areas where good winter forage exists, even following a severe winter.

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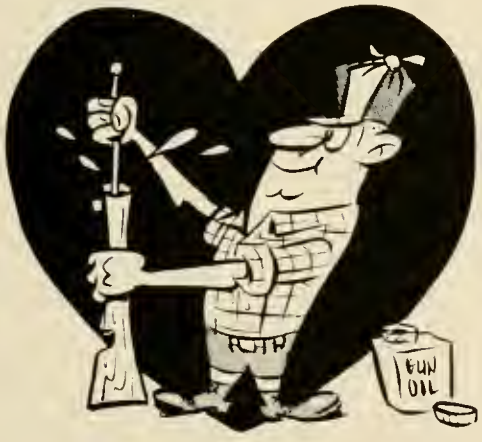



Take as good care of your heart as you do of your gun!

AMERICAN HEART ASSOCIATION

# Heart SAFETY Rules

Check with your doctor on your physical condition. Keep fit the year round. This includes watching your weight.

Plan your hunt. Allow time to adjust to the altitude. Know the location of the nearest phone, doctor, ranger station or Fish and Game department men.

Take plenty of short rests. Avoid unnecessary exertion.

Hunt at a steady, unhurried pace. Don't strain yourself in emergencies. Get your partner to help.

Keep an eye on the weather. Don't try to do as much in hot, humid weather as in cool weather. Don't try to do as much at 50 as you did at 25.

Eat moderately. Take a rest or nap after each meal.

Plan your camp routine to eliminate unnecessary work. Work at a steady pace that suits you. Don't strain yourself. Get help for heavy jobs.

Higher altitudes may lower your tolerance to alcohol. Limit your drinking.

The hunter with a known heart condition should make sure that at least one member of the party knows of his condition, what medicine he takes and how administered. *He should never hunt alone.*

**Lewis & Clark campsite at Eagle Creek on the Missouri.**
**. . . photo by Vernon Craig**

# RIDE THE WIDE MISSOURI HISTORIC WATERWAY

Editor's Note: Materials for this article have been compiled by the editor from many sources. Special credit is due to research of the National Parks Service, to Emil Don Tigney of Havre, and to the Montana Historical Library.

Among the Rocky Mountains of Montana, the Madison, Gallatin, and Jefferson Rivers rendezvous to give birth to the great Missouri. The historic ribbon of water is the longest in the United States. It twists for 2,466 miles to join the Mississippi near St. Louis, gulping the lesser streams that add bulk and strength to its sinuous body.

John G. Niehardt in his book, "The River and I", wrote, "The Missouri is unique among rivers. I think God wished to teach the beauty of a virile soul fighting its way toward peace—and His precept was the Missouri . . . And in it all the unwearying urge of a purpose, the unswerving belief in peace of a far away ocean."

Colorful history and romance of the "Big Muddy" are legend. It served as an important artery of commerce and beckoned the explorer and trapper into unchartered wilderness. It has carried the Indian canoe, the pirogues of explorers and trappers, keel boats and steamers. It has seen garrisons of soldiers into the heart of hostile Indian nations, eager gold miners to rich diggins and pioneers to virgin sod. Now the spirit of the Missouri has been humbled. It lies harnessed behind dams and tamed between levees. In writing of this river, Chittenden said that "In the most absolute sense its glory has departed, and not a trace is left to remind the modern observer of its former greatness."

Yet, there is one length of the river which remains unfettered and free. Between Fort Benton and Fort Peck Reservoir in Montana both the river and immediate area are unspoiled by civilization and much remains even more remote than it was in the past when it was an important artery of transportation. Though this represents only about seven percent of the entire river it has special historical signifigance.

With the driving of each iron railroad spike the Missouri lost importance as a thoroughfare, and when rails finally were laid in the far west the upper river was again left to itself. All but the most tenacious reminders of man have fallen before the onslaught of rust, dust, and time. It is with this unspoiled part of the river that we are here concerned.

### Setting

Roughly 150 miles of river run between Fort Benton and the mouth of Fort Peck Reservoir. The land lying along the river is known locally as the "Breaks", because of the rugged, inhospitable nature of the terrain. From a boat the traveler is treated to the most unique and picturesque scenery to be found along the entire river course.

Geologically the breaks are errant offsprings of a high plain which is broken by three volcanic mountain masses. To the northeast lie the Little Rockies, the Bearpaws to the northwest, and the Highwoods to the southwest. The breaks were born in the cataclysm of the last continental ice sheet which shoved the Missouri southward from its chosen channel. As the ice retreated northward so did the river for awhile, and now old channel systems lie both north and south of the present river. Erosion has continued to gnaw at the shales, sandstones and silts laid down by ancient seas. Here and there dikes of harder volcanic r o c k thrust through the earth to form sharp, undulating abutments. Scattered groves of cottonwoods occupy the river banks and bottomlands, while nearby hills are dotted with junipers and pines that await thirstily the next storm.

From Fort Benton to about forty miles downstream, canyon walls for the most part slope rather steeply to meet the river. This is probably the least scenic portion of the waterway and is interrupted with c o ns i d e r a b l e objects of civilization, though many are not visible from the water. After leaving Virgelle, the river becomes more isolated and canyon walls become progressively higher and steeper until sheer white cliffs tower from the river's edge. Ages of wind and water have fashioned bizarre shapes and stately colonnades. Less yielding stones like table tops perch precariously atop sandstone columns. Crumbling remains of scattered stone and log dwelling are reminders of a bygone era. After passing some 35 miles through the white sandstone formations, there is a gradual transition of the landscape to badlands. The canyon deepens below steep multi-layered peaks sprinkled crazily among a maze of coulees and ravines. Below the mouth of the Judith River the badlands have become massive and formidable, extending three to four miles back from the river. Below Cow creek, badlands give way to a gentler relief and wide river bottom.

### Inhabitants Before White Man

It is thought possible that some of the earlier Indians to occupy the upper Missouri were Shoshone or Snake Indians. As the Blackfoot Nation became better armed and better mounted through their contact with white men, they probably drove the Shoshones from the area and became the dominant people. At about the same time the Blackfoot took over the Missouri area, the Atsina or Gros Ventre also ventured into central Montana, though their exact territorial limits are vague. Parties of Assiniboin, Crow, and Sioux apparently made sorties periodically for trading and raiding.

Teepee rings and other signs of Indian activity are for the most part situated on bluffs overlooking the river rather

than on the floodplain itself. It is thought that the breaks may have been a natural barrier to large scale Indian movement. There evidently was no agriculture and camps were of temporary nature. Possibly much of the Indian activity immediate to the River could be attributed to attraction of trading posts.

### Preparation of the "River Rat"

If that spark of adventure sets you to fretting, why not answer the river's call and explore this remote, enchanted waterway? Hold on though—if you're not a seasoned river rat—there are some details that need attention **before** you get on the water.

First off, preparation for down-river trips poses a rather unique problem in logistics. How will your car and trailer get from point of departure to point of arrival? The solution we'll leave entirely to your own ingenuity.

Now for your boat—whether you plan to use a plush machine or a canoe, you shouldn't attempt a river excursion without first being a competent operator and making sure equipment is in good repair. The river presents no special hazards besides seasonal shallows and occasional rapids, but if you do become stranded between access points you might be a long way from help. If your boat is motor-driven, enough gas will have to be stowed aboard to see you through the entire trip. Montana law requires that you have one Coast Guard approved life preserver aboard for each occupant and children twelve and under must wear a life preserver while in a moving boat. For further equipment standards, check with the Montana Fish & Game Department. Since the river is seasonally shallow, extra shear pins for outboard motors are a must. A minimum of tools and an extra spark plug or two might come in handy as will a pole or paddle for pushing away from shore and sandbars. Maps of the river should be taken so that you can plot your progress and know points of interest.

Personal gear will depend upon the comforts you demand, but should include a bottle of mosquito repellent, sunburn lotion, sun glasses, a raincoat, and tarp or other means of shelter. It's well to keep clothing and bedding wrapped in water resistant coverings. Keep in mind also that your shoes will get a repeated dunking, for most boat landings will be accompanied by considerable slogging through mud or wet sand that varies from ankle to knee deep.

Food also is a matter of choice, but should by all means include fresh drinking water adequate to see you through the entire trip.

One final note of caution—there will likely be deep grasses and sagebrush at many of your stops. Keep a stout stick on hand to explore bushes and grass in your path because there are rattle snakes along the river. A first aid kit would be advisable, but check with your physician before selecting a snakebite kit.

### Access

At the present time there are only five easily accessible points to the river between Fort Benton and Fort Peck Reservoir. On the western end off U.S. Highway 87 a bridge crosses the river at Fort Benton. Eleven miles north of Fort Benton by highway 87 a side road leads to a ferry at Loma which is situated near the mouth of the Marias River. About twelve miles below Loma access is provided to another ferry at Virgelle. The next river access lies almost sixty miles downstream near the confluence of the Missouri and Judith Rivers. Roads lead to Ophir Ferry at this point from Big Sandy on the northwest and Winifred to the southeast. The final and most eastern access is on U.S. 191 where a bridge (Fred Robinson Bridge) crosses the river at James Kipp State Park. About twelve miles below this bridge the river broadens into Fort Peck Reservoir.

**Crumbling remains of original Fort Benton which was mostly adobe.**
**. . . Montana Historical Library Photo**

### Sites Along the River

With all equipment details taken care of, it's time to start down the river. Keep your maps handy so you will know where you are at all times.

### Fort Benton

You are now at the site of old Fort Benton. The original fort has all but disappeared. Only adobe remnants of an old building still remain and have been protected by a shelter. Fort Benton was established in 1864 by Alexander Culbertson of the American Fur Company. It was the fifth in a series of trading posts to be established between the Great Falls and Fort Peck reservoir. Fort Lewis was constructed seven miles above Fort Benton in 1844, but the post was dismantled and moved to the Benton site only two years later.

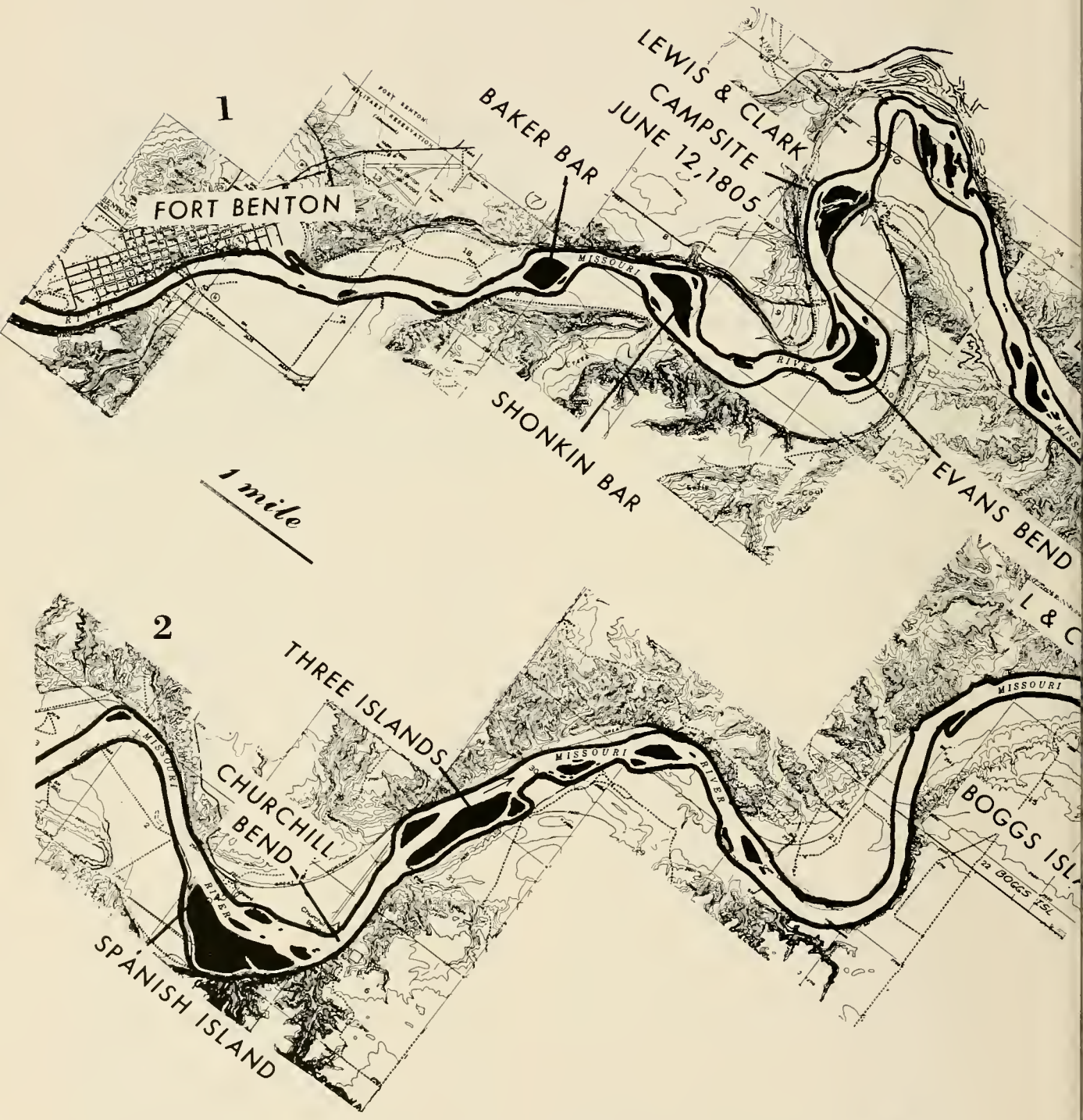
Fort Benton was first also called Fort Lewis, but the name was changed to Benton in honor of a Missouri Senator who had done much for the American Fur Company.

Trading companies used these early outposts as fur markets. Here the Indians and white fur traders alike exchanged their pelts and hides for clothing, arms, firewater, and other items. Very little money was used in the transactions. A number of the fur traders were dishonest and unscrupulous. Liquor was used extensively as an implement to separate Indians from their furs. Mistreatment of the Indians by traders often tended to worsen Indian-white relations on the frontier.

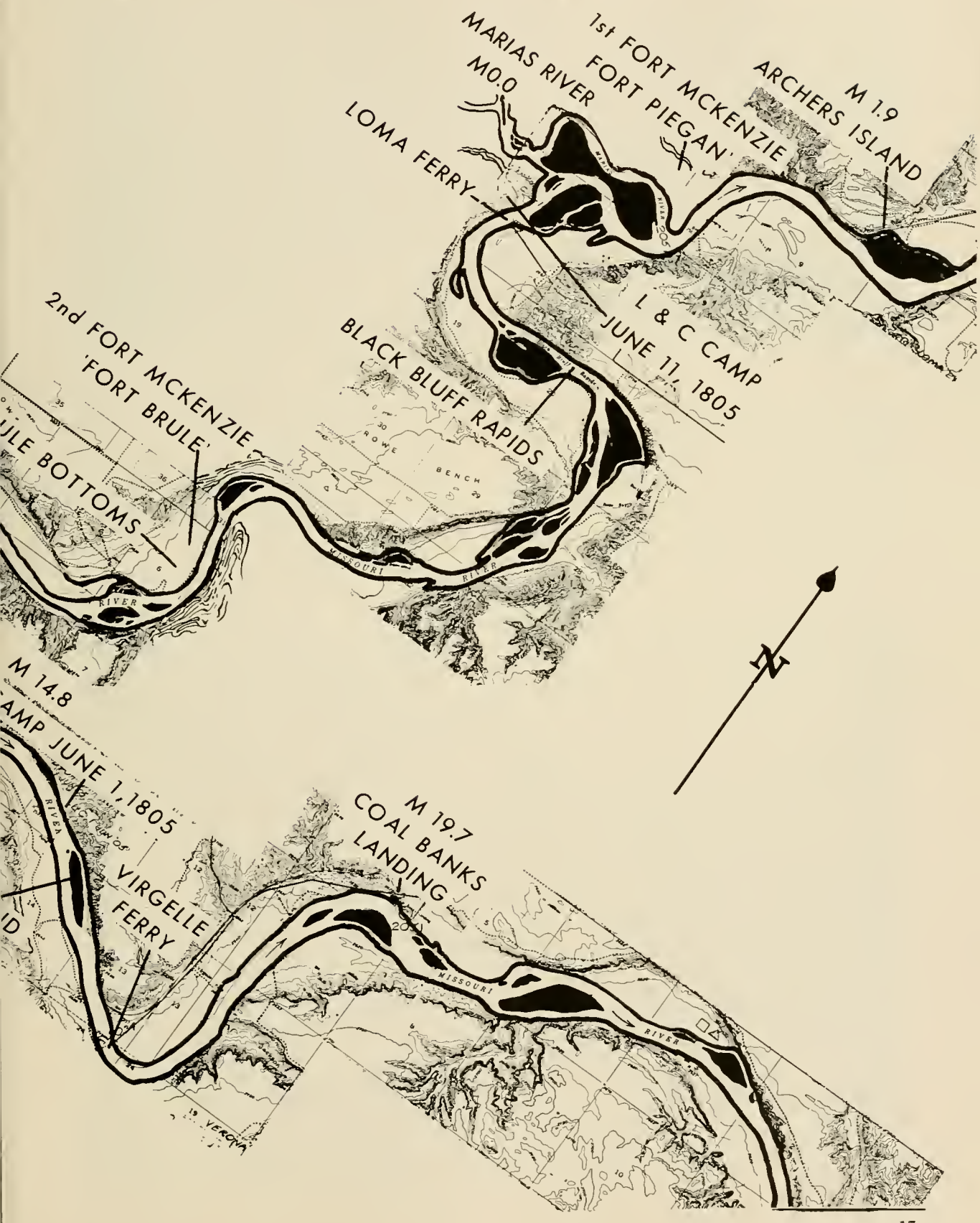
Fort Benton became a military post and an important center of commerce, for it was the uppermost point of the river to accommodate most steamboats.

Fur traders made their first establishment at Fort Benton in 1831, but it was not until the steamships began to arrive that the town really boomed. When the boom came, it was a riotous town that drew outlaws, criminals, and law abiding alike. Vigilantes were sometimes obliged to take matters into their hands in order to bring a semblance of law to the potential powder keg. The first steamer, "Chip-

M + number indicates numbered iron markers which mark interesting sit



and show miles downstream from the Marias and Missouri Rivers confluence.



**Busy streamboat traffic on the Missouri.**
**. . . Montana Historical Library Photo**

pewa," puffed into Brule Bottoms a short distance below Fort Benton July 17, 1859. She was under command of the famous John LaBarge. Although the "Peter Balen" ascended on June floodwaters to Belt Creek several miles above Fort Benton, Benton has always been considered the head of navigation on the Missouri.

With the discovery of rich gold fields in Idaho and Montana during the early sixties, river trade boomed. It hit a peak about 1867, and at times 30 to 40 steamboats were on the Missouri at one time between Fort Benton and the mouth of the Yellowstone. In 1866, the "Luella" carried $1,250,000.00 in gold dust downriver. July 29, 1875, the John G. Gowey Company shipped 12,450 pounds of buffalo robes, 33,890 pounds of deer and antelope hides, 26,800 pounds of elk skins, 6,120 pounds of beaver skins, 1,600 pounds of tanned deer skins, and hundreds of smaller pelts. The colorful vernacular of wagonmasters filled the air on roads leading from boat landings, and the Mullan Road became a connecting link between the Missouri and Columbia Rivers. With completion of railroads in the area, Fort Benton lost its distinction as "Chicago of the West" and began to die. The last commercial boat to arrive at her landing left there in 1890 and the last page was written in the colorful history of the upper Missouri steamers.

**Lewis & Clark Campsite—June 12, 1805**

This was the last campsite of Lewis and Clark below Fort Benton. Undoubtedly, there was apprehension among the party as members had questioned the wisdom of Captain Meriwether Lewis in choosing between this river and the Marias as the one which would lead to the Great Falls of which Indians had spoken.

**Second Fort McKenzie (Fort Brule)**

The second Fort McKenzie was established after destruction by fire of the first Fort McKenzie (better known as Fort Piegan) which was located near the mouth of the Marias River. The namesake, Kenneth McKenzie was a giant among the fur traders. Fort McKenzie, later known as Fort Brule, was built at this point about six miles above the confluence of the Marias and Missouri in 1832.

The keel boat, "Flora", heading upriver with trade goods for Fort McKenzie sunk in a storm before reaching its destination and the trade goods were lost. General Mitchell returned to Fort Union at the Yellowstone for more supplies, but the Indians felt they had been duped and were very hostile when the party did arrive. Chittenden had this to say about construction of the fort in "The History

of the American Fur Trade of the Far West." "The erection of this new post at this point was one of the thrilling episodes of the fur trade. There were several thousand Indians present, who had assembled from all quarters. The whites during the building of the fort lived on their keelboat. They worked like beavers, for the peril of the situation was apparent to all. Many of the Indians were actually hostile and were ready for desperate measures."

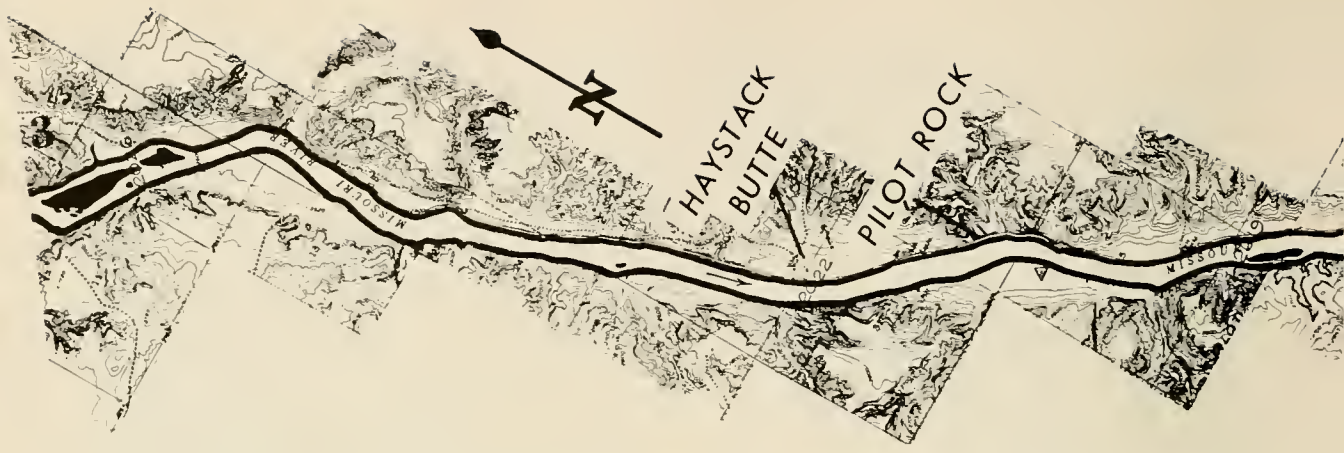
During 1843, two unscruplous traders, Chardon and Harvey, were running Fort McKenzie. Chardon talked Harvey into helping him avenge the Indian killing of his negro servant. When a band of Blackfoot came to the fort for trade, the chiefs were invited inside a post building. A concealed cannon was fired into the crowd waiting outside with furs and though intentions were to also kill the chiefs, they escaped. Twenty one Indians were killed by the cannon blast and a number were wounded. The wounded were then sent to the happy hunting ground and all were scalped.

Due largely to hostility of the Indians this fort was abandoned in 1843 in favor of another site, Fort Chardon, downstream near the mouth of the Judith River. As soon as the fort was abandoned, the Indians burned it down. The post location became known as "Brule (F. Burnt) Bottoms" and the old fort became commonly known as Fort Brule.

**Lewis and Clark Campsite—June 3-11, 1805—First Fort McKenzie (Fort Piegan)**

June 3, 1805, found Lewis and Clark expedition at the mouth of a river which Captain Lewis named "Maria's River" in honor of a young cousin, Maria Wood. The encampment of June 3 was situated on the south shore of the Missouri opposite the entrance of the Marias River. On the following morning, however, the camp was moved to the north shore near the conflunce of the two rivers.

**Steamboat landing at Fort Benton.**
**. . . Montana Historical Library photo**




Now that they were nearing the upper reaches of the river, the expedition leaders were faced with the problem of determining which waterway they should pursue. Their intentions were to stay with the river which Indians had told them contained some great falls and would carry them most westward. Parties were sent to search for falls on both the Marias and the Missouri Rivers, but by June 8 there was still no evidence to indicate which was the proper river. A decision was made on June 8 to proceed up the Missouri—a decision that was not to the thinking of many expedition members. During the next two days about a thousand pounds of articles were stored in an underground cache near the camp and a large pirogue (dugout canoe) was hauled ashore and concealed under brush. The expedition continued upstream on June 11.

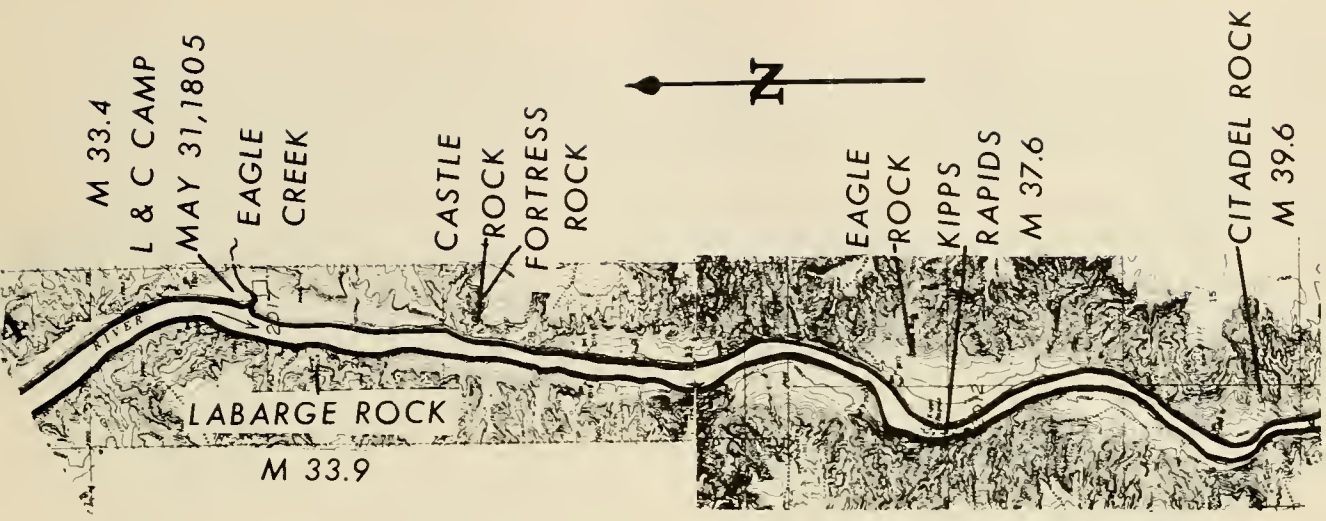
Years later, during 1831, the first Fort McKenzie (Fort Piegan) was constructed a bit upstream and to the east of the Marias River. This was an event of considerable historic signifigance, for until that time the hostile Blackfoot Indians effectively blocked fur traders from the Upper Missouri. The most interior trading post had been located at Fort Union on the Yellowstone River.

With the arrival of Kipp and his party there was a great gathering of Piegan Indians. Kipp smoked with the chiefs, gave them gifts, and persuaded them to withdraw from the area while the post was being constructed. Kipp was reported to have collected 2,000 beaver skins during the first ten days of trade. Beaver skins were worth about $6.00 each. Blood Indians, agitated by British fur interests, attacked the little fort, but Kipp, knowing well their weakness, lavished them with liquor and they succumbed to their good treatment—and elixir. After the first winter Kipp and his party set out for Fort Union with their wealth of furs and the fort was destroyed.

There are two accounts as to the demise of old Fort Piegan. One states that the Indians razed the buildings soon after Kipp and his party pulled out. The second account declares that Major Mitchell who succeeded James Kipp had deliberately burned the buildings in favor of locating at the second Fort McKenzie site.

There were no further historical episodes of signifigance in this area until the steamers started churning their way up the river. Earlier steamboats were not designed to cope with the shallow waters and rapids of the upper Missouri, and though the "Independence" came upriver for 200 miles in 1819, it was not until 1859 that the "Chippewa" succeeded in navigating the river to unload cargo at Brule Bottoms. This unlucky steamer made only one more trip. At the mouth of Poplar River deckhands set the boat afire while stealing liquor. The boat, which carried gun powder among its cargo, was abandoned and shortly blew up.

River boats were eventually designed with broad beams which afforded shallow




draft, as little as 18 inches. They were propelled by a huge stern wheel driven by two steam engines. Wood provided fuel to heat the boilers. During seasonal shallow water, cargo from the larger boats was unloaded downstream and transferred to smaller craft for delivery to upriver points.

In 1865, the Ophir Townsite Company set up a steam sawmill with intentions of building a town near the mouth of the Marias. However, the massacre of ten log cutters by Blackfoot Indians put an early end to the enterprise. The massacred men were buried side by side in a common grave which was marked by a single headboard.

### Archer's Island

As late as 1909 this island which is now attached to the north river shore was a difficult obstacle to larger boats.

### Lewis and Clark Campsite June 1-2, 1805

This campsite is on the small flat on the north side of the river, and was apparently in a grove of trees.

### Coal Banks Landing

One of the most nagging problems of the river captains was getting sufficient wood to heat the ships' boilers. While underway, the average boat burned about thirty cords of cottonwood every twenty four hours. Accordingly, easy to get wood soon disappeared from riversides and bottomlands.

Coal is found in many places along the river and was mined near Coal Banks Landing in a futile attempt to provide steamer fuel. The coal was of such a poor quality that it would only redden around the edges when added to fireboxes.

### Lewis and Clark Campsite May 31-June 1

This encampment on the east shore of the river at the mouth of Eagle Creek was one of the most picturesque stopovers of the expedition. The creek was named "Stonewall Creek" by Lewis and Clark because of the sheer stone escarpments that are so common in the vicinity.

A postoffice "Conley Postoffice" was later situated at this unlikely spot on the river.

### LaBarge Rock

A number of landmarks up and down the river served as signposts for captains and pilots of river boats. Consequently, some of the islands and formations were named after well known river travelers and from events arising from boating.

Captain LaBarge was one of the best known navigators of the upper Missouri River. LaBarge has been noted as being the "principal informant of Hiram M. Chittenden during the compilation of his

**Eagle Rock.**

**. . . photo by Vernon Craig**

notable work on steamboat history." In addition to being a capable captain, LaBarge was also an able pilot. Most steamers carried a pilot in addition to the captain. When boats began to carry large billets of passengers they generally carried professional hunters also. The hunters would leave the boats during the night, proceed ahead and leave game hanging at conspicuous spots.

Though captains appeared to hate with passion the river pilots because of their independence, Chittenden gave them an important place in his writings. He stated, "The Missouri River pilot was beyond question the most skillful representative of his profession. In no other kind of navigation were the qualties of quick perception, intuitive grasp of a situation, nerve to act boldly and promptly, coolness and judgment in times of danger, so important and so constantly in demand."

### Kipps Rapids (Eagle Rapids)

The rapids were named in honor of James Kipp who was instrumental in opening up the Blackfoot country to trade. During the high water, these rapids like others on your route would seem to present few problems to river travel. However, when low water brought rocks near or above the surface, they were difficult obstacles for the heavily laden steamers. Many were stranded for days or weeks in the rapids while others met complete disaster.

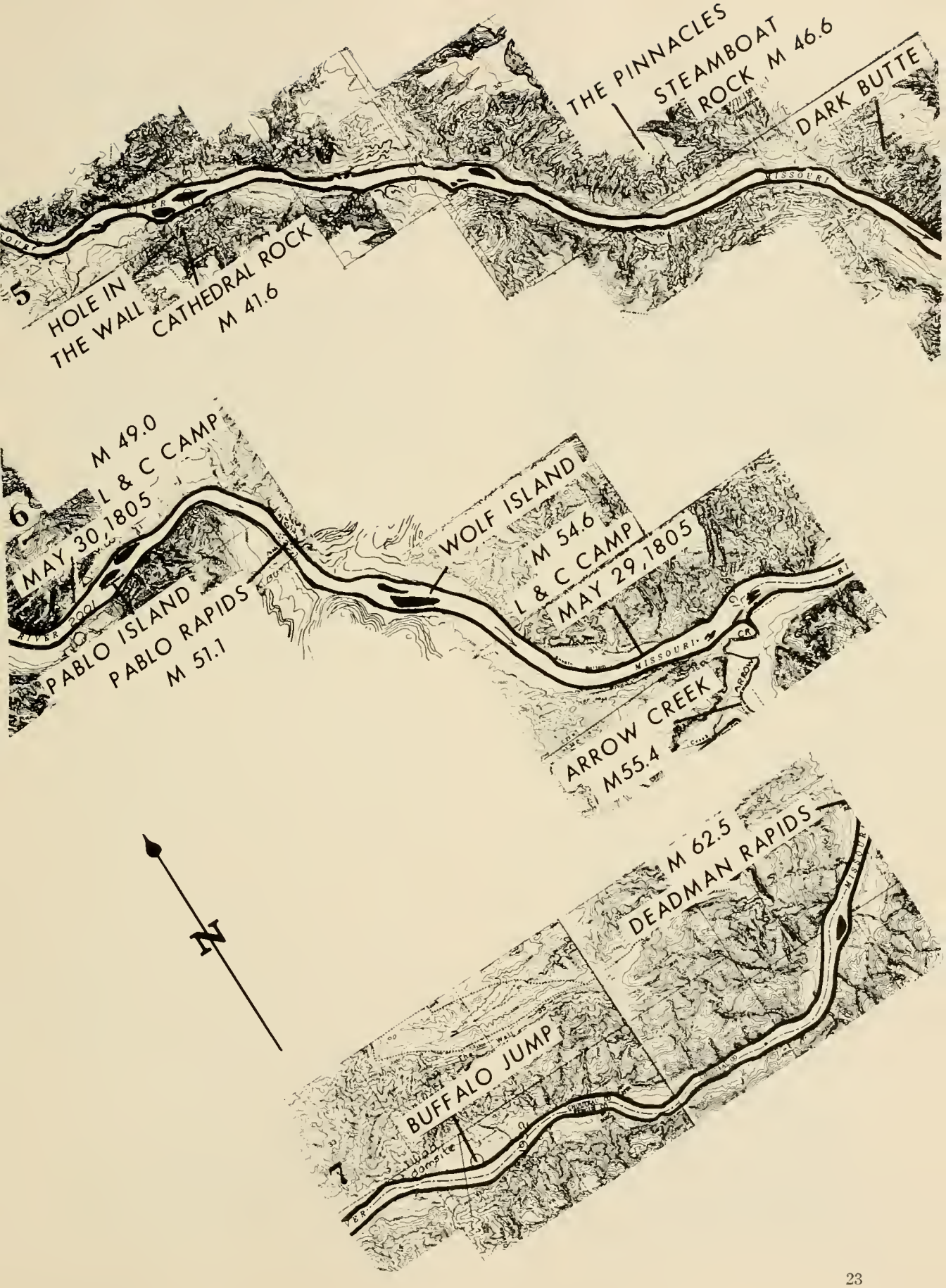
Niehardt described his approach to the rapids thusly. "We had covered about ten miles when a strange sighing sound grew upon us. It seemed to emanate from the soaring walls of rock. Steadily the sound increased. Like the ghost of a great wind it moaned and sighed above us. Little by little a new note crept in—a sibilant metallic note as of a tense sheet of silk drawn rapidly over a thin steel blade."

### Citadel Rock

Citadel Rock, resembling a sprawling ruin, is located on the west side of the river at one of the narrowest points along the upper Missouri. The name is of late origin.

### Hole in the Wall

The "Hole in the Wall" can be seen from some distance upstream as a natural opening near the top of a large rock formation. It is located on the west side of the river.


THE PINNACLES
STEAMBOAT ROCK M 46.6
DARK BUTTE
5
HOLE IN THE WALL
CATHEDRAL ROCK M 41.6
M 49.0
L & C CAMP MAY 30, 1805
6
PABLO ISLAND
PABLO RAPIDS M 51.1
WOLF ISLAND M 54.6
L & C CAMP MAY 29, 1805
ARROW CREEK M55.4
N
M 62.5
DEADMAN RAPIDS
7
BUFFALO JUMP

### Elbow Rapids

Elbow Rapids which lie at the base of this rock prominence was another obstacle encountered by steamboats. Crewmen of the Chippewa took to shore here and fastened a sturdy towline to a "deadman" buried crosswise on the beach. The boat was pulled up the rapids by winding in the towline by use of a capstan. This practice was known as "warping."

### Cathedral Rock

Cathedral Rock is situated a few hundred feet below Hole in the Wall. The formation is hidden from sight of travelers upstream, but is very impressive from a downstream vantage point.

### Steamboat Rock

Steamboat Rock is a large columnar rock on a bluff north of the river. It is located 2,215 miles from the Gulf of Mexico according to reckoning of the Mississippi and Missouri River Commissions.

It may be timely at this point to explain more of the boats that were used on the upper Missouri, lest one be led to think that steamers had the market cornered. The important boats on the Missouri included canoes, pirogues, mackinaws, bullboats, keelboats, and steamboats.

Canoes were a shell of wood generally hewn from a large cottonwood tree. They ranged from fifteen to twenty feet long. The boat hull was strengthened by partitions left crosswise in the shell. When a square end was left on the canoe it was called a pirogue. Canoes were used mostly for short, local trips, and were floated individually or in pairs joined by a platform which was then floored over. Sails could be used on the craft.

Mackinaws were made of hand sawed lumber and were fastened together by wooden pins. They were flat bottomed craft and usually carried five men, four at the oars and one at a rudder. The high ended, unique boats were used for downriver trips only and carried about fifteen tons of freight. In this area, the yard for making mackinaws was located some distance above Fort Benton at the mouth of Shonkin Creek.

Bull boats were shaped much like inverted mushrooms. The frameworks were made of willows which were covered by the hides of buffalo bulls.

Keelboats were 60 to 70 foot long wooden craft with about a 30 foot mast and a keel from bow to stern. Most of these were built in Pitsburg. They were propelled by a number of systems. Sometimes they were pulled by a long line (cordella) attached to the top of the mast. Sometimes oars were used, while again long poles were used to push them along. When the wind was right, a square sail was rigged. In rapid water, a long line was sometimes tied upstream, and then the boat was pulled along by men taking line in on the deck. This was another method of "warping."

### Lewis and Clark Campsite
### May 30-31, 1805

There is some confusion over the precise location of this campsite. Because of the terrain and other features, Mr. Don Tigney and others feel that the encampment was in the bend of the river at the east end of the bottom and a little ways above Pablo Island.

### Pablo Rapid

The steamboat "Marion" captained by Abe Wolf became grounded in these rapids during 1864. Another boat, the "Luella," was brought downstream from Fort Benton to rescue the passengers and freight. The ship's machinery was salvaged and sold at Fort Benton.

### Lewis and Clark Campsite
### May 29-30, 1805

This camp was set up on the north shore near the lower end of Sneath Bottom.

### Arrow River (Slaughter River)

The Gros Ventre summer camp of some 240 lodges was located at the mouth of this river when Maximilian visited the area in 1833. Lewis and Clark called this stream Slaughter River because they had noted fragments of at least 100 buffalo carcasses at a jump a few miles downstream.

### Deadman Rapids

Lewis and Clark had named these rapids "Ash Rapids" because of the ash trees they saw here. The rapids at one time were also known as "Drowned Men," and later "Drowned Man" Rapids. What prompted the change of name is not known.

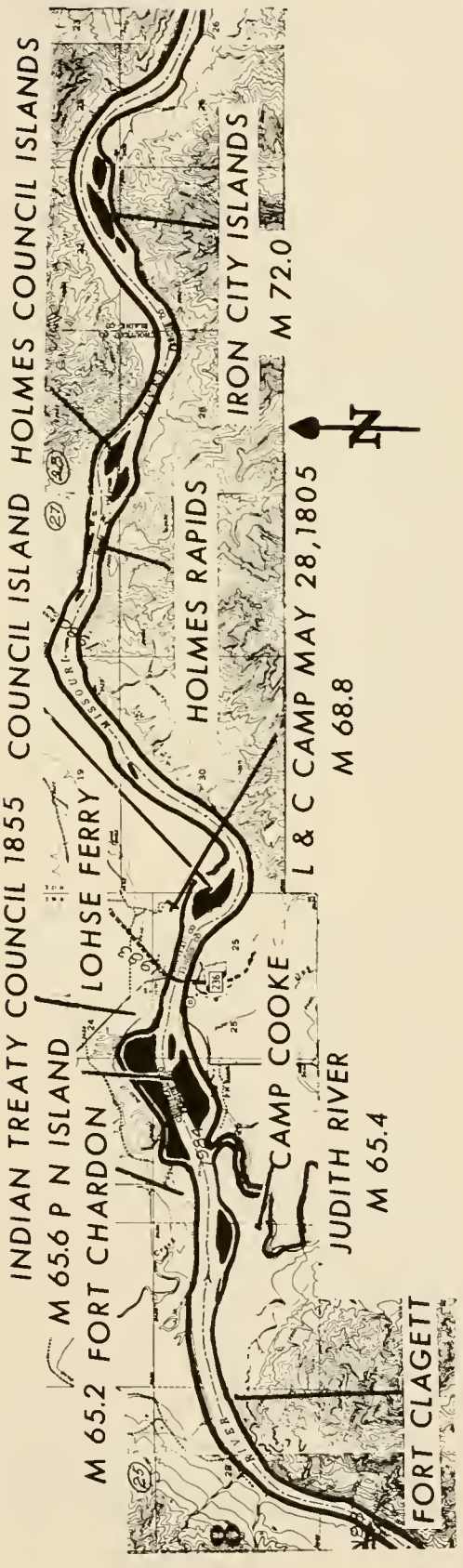
A wood yard to provide steamers with fuel was located at the head of the rapid.

### Fort Claggett, Camp Cook, Fort Chardon

The area lying around the confluence of the Judith and Missouri Rivers is especially rich in historical sites and events.

After 1863 the Indians along the Missouri became so fierce that it was necessary to establish military garrisons along the river in order to protect shipping and river travelers. In 1866 William Clinton of the 13th U.S. Infantry established the military outpost of **Camp Cook** about ½ mile above the contemporary mouth of the Judith River. This was the first permanent military establishment in Montana. The buildings were described as "entirely of cottonwood logs with dirt floors and roofs and no windows, and there were no casings for them and no glass." (The sketch of Camp Cook does, however, show openings resembling those of windows in the buildings.) Rain came through the sod roofs and snow sifted through the poorly fitted walls. The little garrison apparently was an unhappy one, unkept, of low morale, and saw frequent desertions. The garrison totaled about 428 officers and men.

Sioux Indians harassed the post in 1868 and ran off 34 horses and mules. On May



17 the post was attacked by some 2,500 Sioux. The camp was abandoned in 1870 after the threat to commerce on the upper Missouri had subsided.

The small Indian trading post, **Fort Clagett**, was located near Camp Cook and continued to operate for a few years after abandonment of the military post. One of the old stone warehouses used at Judith Landing still stands and is used as a barn at the P. N. Ranch, though the log structures have fallen completely to decay.

Readers will remember an earlier mention that the second Fort McKenzie was abandoned at Brule Bottoms in 1843 and Fort Chardon was built near the mouth of the Judith River. **Fort Chardon** was across the river and somewhat downstream from Camp Cook and Fort Clagett. The fort was described as poorly located for trading and because of the Indian massacre Chardon had arranged at McKenzie, did not get Indian trade and was abandoned. Culbertson burned the post after establishing Fort Lewis to show the Indians his contempt for the slaughter that Harvey and Chardon had committed at Fort McKenzie.

From the south the Judith River joins the Missouri. It was first called the "Bighorn" by Captain Lewis because of the abundance of bighorn sheep in the vicinity. However, Lewis conceded to the wishes of Clark to name the river "Judith's River" after 13 year old Julia Hancock of Fincastle, Virginia. Julia, nicknamed Judy, later became the wife of Captain Clark and bore him five children before dying at the age of 29.

The terrible smallpox scourge that ran rampant through Indian tribes was in a sense exported from the Judith Landing. In 1837, smallpox broke out in a party bringing supplies to Fort McKenzie (Fort Brule). The party stopped at the mouth of the Judith River, but upon insistence of Piegan Indians finally moved the cargo and dread disease up-river. After the Indians got smallpox, none appeared at Fort McKenzie for about two months. A party exploring the headwaters of the river in order to determine what had happened to the Indians found a village of 60 lodges abandoned. Dead bodies were everywhere. It has been estimated that the loss among Bloods, Blackfoot, and Piegans was around 6,000 persons.

Across from the mouth of the Judith and downstream on the cottonwood-studded plain a grand council was held in 1852. Isaac Stevens, Governor of Washington Territory, and others assembled with eight Indian tribes to talk of peace. Tribes included Blackfoot, Bloods, Piegans, Gros Ventre, Nez Perce, Kootenay, Pend d'Oreille, and Flathead. The council, which was intended as an instrument in moving wild Indians onto reservations, lasted for ten days and drew this comment from Chittenden. "The Indians departed with their lavish presents. The era of the fur trader had ended and that of the Indian Agent had come."

### Dog Creek

Dog Creek which enters from the south was called "Bull Creek" by Lewis and Clark. The party was camped below Dog Creek when a buffalo bull swam the darkened river, clambered over one of the pirogues and ran a zig-zag course among the sleeping men.

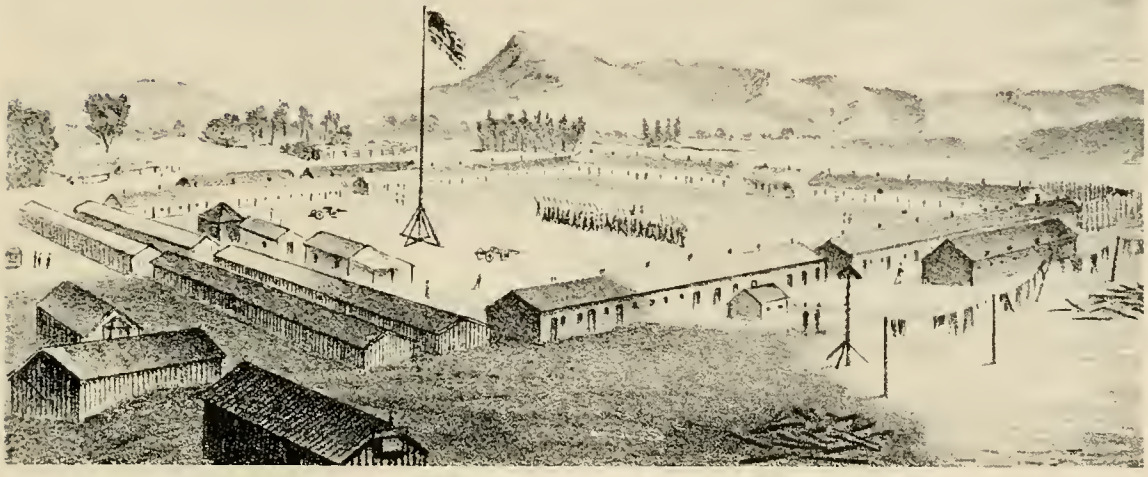
### Lewis and Clark Camp May 28-29, 1805

The encampment visited by the buffalo was located on the north side of the river below the present site of Lohse Ferry.

### Iron City Islands

The steamboat "Iron City" came under Indian attack while grounded on these islands in 1866. Crews working to free grounded boats or to load wood were in constant danger from Indians. While underway, the passengers were relatively safe behind piles of cargo, and on many of the vessels a protective sheathing of boiler plate was placed around the pilot house.

Trading post Fort Clagett.
. . . Montana Historical Library photo



Pencil sketch Camp Cook taken from diary of an army officer's wife.
. . . Montana Historical Library photo

### Gallatin Rapids

The steamboat "Gallatin" was almost destroyed in these rapids during 1867.

### Dauphin Rapids

Louis Dauphin, a famous western hunter and guide, fell into the river here while accompanying Maximilian on his journey. Like many other rapids, this stretch of water was a difficult obstacle for steamboats, and were often negotiated only with the help of strong backs and tow ropes. A number of boats operated above the rapids for relay of cargo from boats that were not powerful enough to cope with the upper river.

### Lewis and Clark Campsite May 27-28, 1805

The camp was situated on the lower edge of a shallow bottom on the south side of the river.

### Lewis and Clark Campsite May 26-27, 1805

Location of this campsite was at the upper point of a small grove of timber on the south shore above Bird Rapids. Clark mentioned seeing an elk cow and calf near the rapids.

### Cow Creek

This stream was named "Windsor's Creek" by Lewis and Clark after a member of their party.

### Cow Island

Because of the wide stream and shallow water near Cow Island, many boats were not able to proceed above this point during low water, and steamers would unload at a landing here. Consequently, the island became an important rendezvous. Passengers were often a rough and ready lot so the landing periodically was witness to tempestuous parties and to violence. For example, in 1867 the crew of the "Imperial," having a greater feeling of duty to their own skins than their boat, abandoned the steamer to some 300 threatening passengers. In another episode, the "Tempest" overrun by both drunken passengers and crew became grounded at Cow Island. A Captain Marsh traveled all the way from Saint Louis in order to sober the crew and get the steamer afloat again.

Under the leadership of Chief Joseph, the Nez Perce Indians left their Northern Idaho reservation in 1877 and fled for the Canadian border. Even though the large party included women, children, and belonings, Chief Joseph managed to outmaneuver the army. He clashed with General Gibbon in the Bighole Basin of southwestern Montana leaving 69 army casualties.

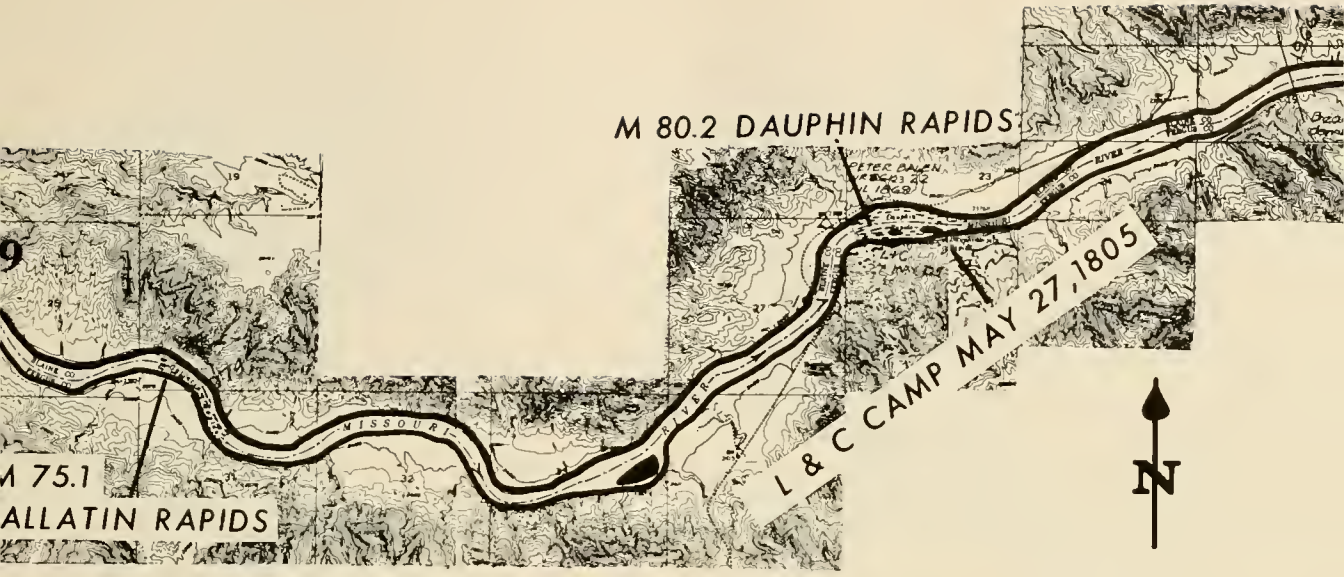
Chief Joseph's band crossed the Missouri near the mouth of Cow Creek. A stockpile of army supplies and equipment at Cow Creek landing was being guarded by a handful of soldiers and a couple civilians. The Indians asked for food but when given only a small amount sent the guards scurrying for cover and took what supplies they wanted. They then set fire to the remaining stores. Joseph's party continued up Cow Creek Canyon, but were eventually cut off and surrendered to General Miles in the Bearpaw Mountains.

Rifle pits are still discernible in this area.

### Wood Hawk Creek

The tremendous quantities of wood burned by steamers necessitated replenishing of their fuel supply at various spots along the river. Woodhawks made a perilous living in this hostile land by gathering wood for sale to the steamers. It hardly seems that the price of eight dollars per cord was sufficient incentive for the dangers the woodhawks faced. It was stated that "Their lives were dangerous, and often short, with at least seven killed by Indians below Fort Benton in the summer of 1867 alone."

The crews were vulnerable to Indian attack also while fuel was being hauled


M 80.2 DAUPHIN RAPIDS
L & C CAMP MAY 27,1805
M 75.1
ALLATIN RAPIDS
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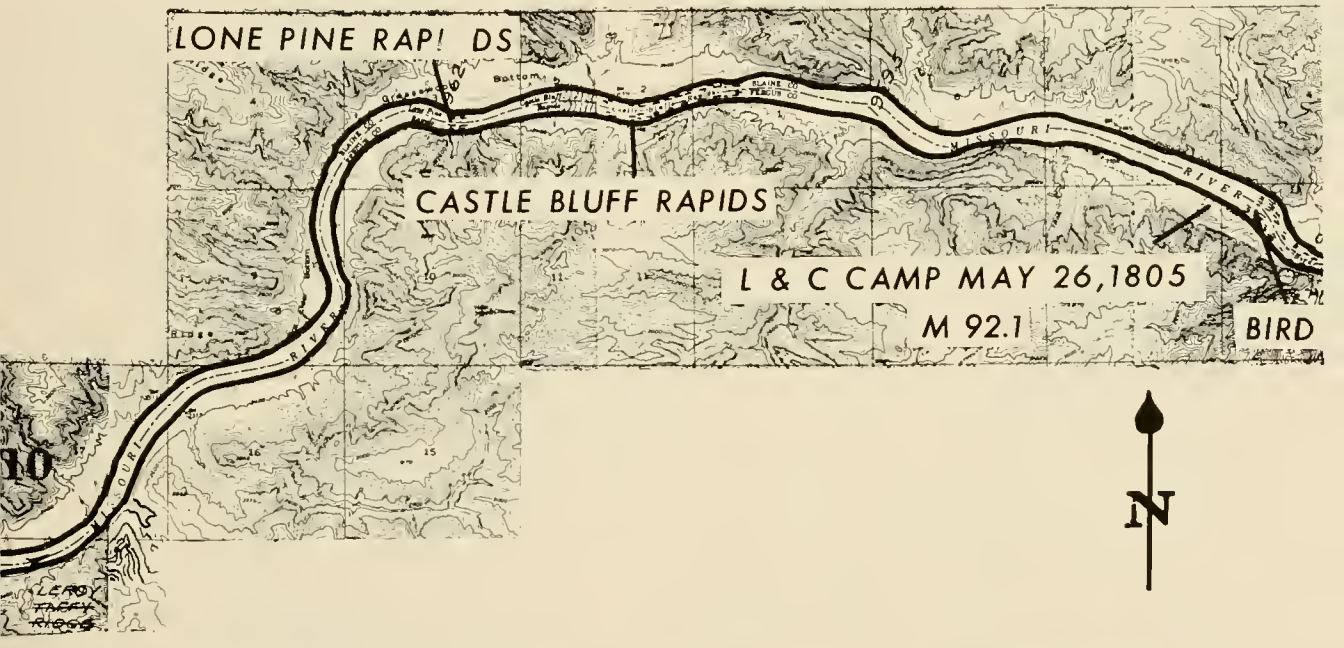
LONE PINE RAPIDS
CASTLE BLUFF RAPIDS
L & C CAMP MAY 26,1805
M 92.1
BIRD
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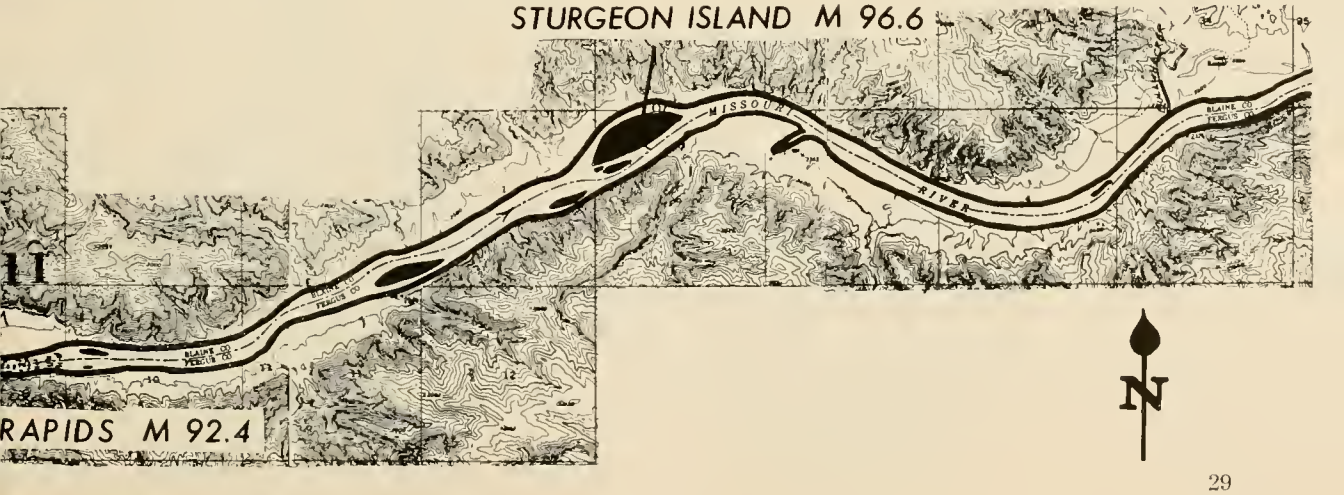
STURGEON ISLAND M 96.6
RAPIDS M 92.4
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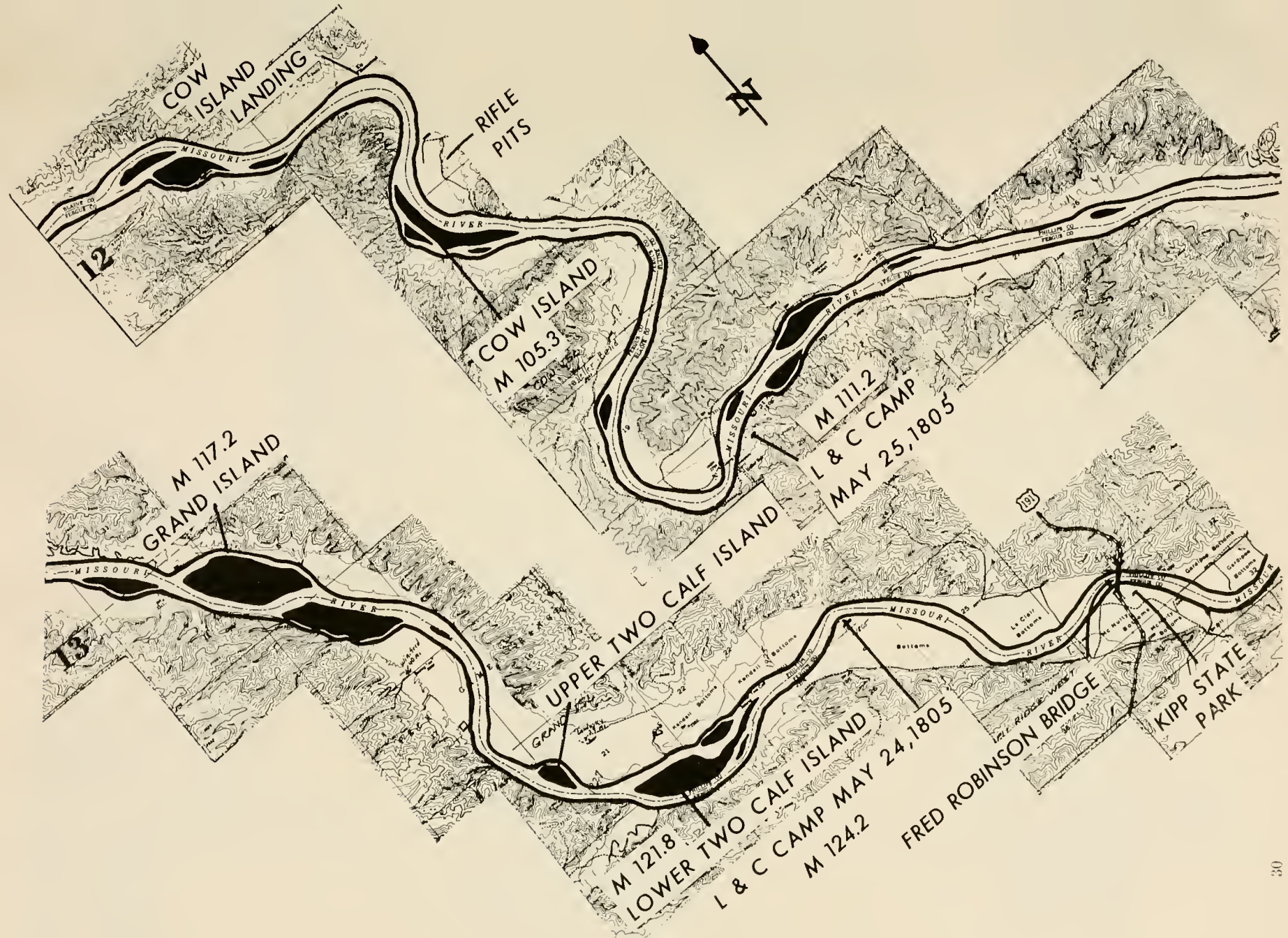

COW ISLAND LANDING
RIFLE PITS
COW ISLAND
M 105.3
M 111.2
L & C CAMP
MAY 25,1805
M 117.2
GRAND ISLAND
UPPER TWO CALF ISLAND
LOWER TWO CALF ISLAND
L & C CAMP MAY 24,1805
M 121.8
M 124.2
FRED ROBINSON BRIDGE
KIPP STATE PARK
MISSOURI RIVER
12
13
N

aboard. Some captains devised means to speed up loading in order to minimize the danger. Captain LaBarge reportedly kept a yoke of oxen aboard one of his boats so that he could quickly drag large pieces of wood aboard. The wood was sawed up with a deck-mounted steam saw while the boat was underway.

### Lower Two Calf Island

An expedition in 1860 killed a cow elk here which had two calves. Thus the name of the island. This was probably a portion of "Tea Island" named by Lewis and Clark.

### Lewis and Clark Campsite May 24-25, 1805

This campsite was on the south shore at the upper end of Knox Bottom.

### End of the Trail

Shortly you will reach a highway bridge (Fred Robinson Bridge) which crosses the river and since this is the last access point on the river I will leave you here. A few miles below the bridge the Missouri is tamed as it swells into Fort Peck Reservoir. Beyond this point it has largely lost its historic value. Important landmarks and historic sites have been inundated by water and blanketed under silt.

I hope you have enjoyed the scenery, reliving and recounting the past whether you have taken the trip in fact or fantasy. The day may be near when this pleasant and exciting voyage is left to fantasy alone, for there are plans to empound this last, lovely, wild reach of water. Perhaps our monument to explorers, trappers, adventurers and pioneers will be a pillar of concrete and the whirr of generators.

The Montana Fish and Game Commission has designated the river from Fort Benton to Fort Peck Reservoir as a State Historic Waterway. Whether or not the area will remain such a waterway in the face of other interests depends upon public support. If you feel that something should remain of the past—that at least a whisper should remain of the wild river, then let your voice be heard or the voice of the river will forever be stilled.

In case you're interested in reading more about the Missouri in earlier days, a short bibliography is listed below.


J. M. Hamilton, "From Wilderness to Statehood," Binfords & Mort, Pub., Portland, Oregon

Hiram M. Chittenden, "History of Steamboat Navigation on the Missouri River," 2 Vols. (New York: Francis P. Harper, 1903)

Reuben Gold Thwaites. "Original Journals of the Lewis and Clerk Expedition," 1804-1806, 7 Vols. (New York: Dodd, Mead & Co., 1904)

Charles Larpenteur, "Forty Years a Fur Trader," 2 Vols. (New York: Francis P. Harper, 1899)

Grace Flandrau, "Frontier Days Along the Upper Missouri," (Compliments of the Great Northern Railway, N.D.), leaflet.

John G. Neihardt, "The River and I, (New York: G. P. Putman's Sons, 1910)

# BROCHURE WILL SOON BE AVAILABLE

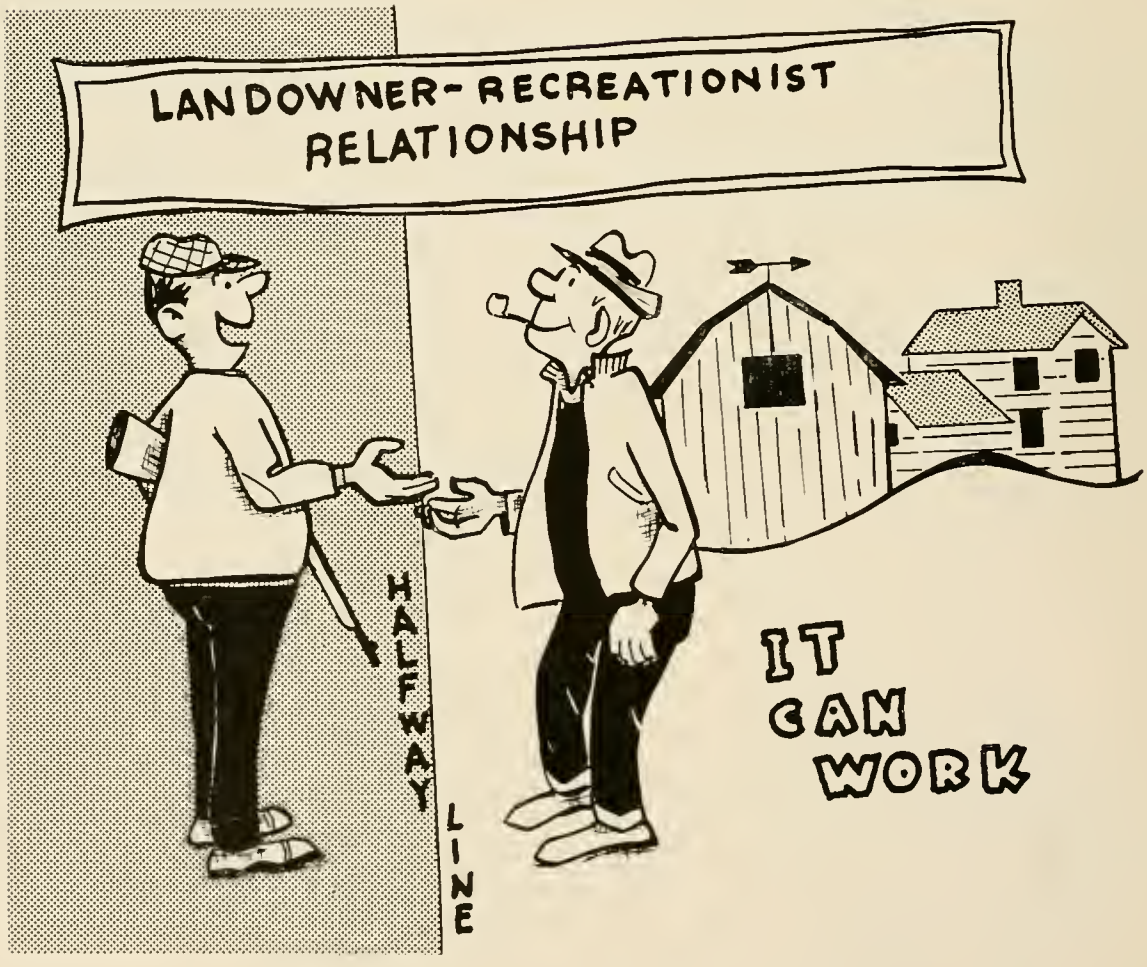
A brochure will soon be available as a cooperative effort of the Fish and Game Department and the Montana Stockgrower's Association. The pamphlet will stress the need for better relations between recreationists and landowners.

Courtesy, consideration, and common sense will be the dominant theme of the illustrated publication.

Each form of outdoor recreation has its unique features that appeal to people, and the enjoyment of these things in always highest when courtesy, consideration and common sense are the guidelines.

The word recreationist will be linked more frequently in the future with this program because it includes all types of outdoorsmen — hunters, fishermen, picnickers, hikers, shutter bugs, rock hounds, artifacts hunters, boaters, etc.

The Fish and Game Department hopes to work closely with individuals as well as organized landowners such as the stockgrowers, woolgrowers, sportsmen groups, and state and federal agencies on a program of better understanding the problems that each group faces.



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